BASIC INFORMATION

DEFINITION

Hot flashes are sudden onset of intense warmth that begins in the neck or face, or in the chest and progresses to the neck and face; often associated with profuse sweating, anxiety, and palpitations.

SYNONYMS

HFs
Vasomotor symptoms (VMSs)

ICD-10CM CODES

N95.1 Menopausal and female climacteric states
R23.2 Flushing

EPIDEMIOLOGY & DEMOGRAPHICS

- Hot flashes affect 75% of postmenopausal women.
- Most hot flashes begin 1 to 2 yr before menopause and may resolve after 2 yr. Average duration is 5 yr.
- 15% of women report duration of hot flashes >15 yr.
- Complementary therapies for hot flashes account for $34 billion in out-of-pocket spending in the U.S. annually.

PHYSICAL FINDINGS & CLINICAL PRESENTATION

- Profuse sweating and red blotching of skin may be noted during the vasomotor event.
- Palpitations and hyperreflexia may be present during the hot flash.
- Hot flashes typically last 1 to 5 min.
- Each hot flash is associated with increase in temperature, increased pulse rate, and increased blood flow into the hands and face.
- Hot flashes during sleep are common and are referred to as *night sweats.*
- There is considerable variation in the frequency of hot flashes. One third of women report more than 10 flashes per day.

ETIOLOGY

- Dysfunction of central thermoregulatory centers caused by changes in estrogen level at the time of menopause
- Tamoxifen use
- Chemotherapy-induced ovarian failure
- Androgen ablation therapy for prostate carcinoma

DIAGNOSIS

DIFFERENTIAL DIAGNOSIS

- Carcinoid syndrome
- Anxiety disorder.
- Idiopathic flushing
- Lymphoma (night sweats)
- Hyperthyroidism
- Hyperhidrosis

WORKUP

Evaluation of hot flashes is aimed at excluding the conditions listed in the differential diagnosis.

LABORATORY TESTS

- Follicle-stimulating hormone (FSH), luteinizing hormone, estradiol level. The serum FSH levels rather than estradiol levels are associated with greater severity of hot flashes in older postmenopausal women, suggesting that nonestrogen feedback systems may be important in modulating the severity of hot flashes. It is not necessary to obtain an FSH to make the diagnosis of menopausal status, however. An amenorrheic woman over age 50 with vasomotor symptoms is assumed to have made the menopausal transition and serum markers of menopause are not required to complete the diagnosis.
- Thyroid-stimulating hormone (TSH).

TREATMENT

NONPHARMACOLOGIC THERAPY

- Behavioral interventions such as relaxation training and paced respiration have been reported effective in reducing symptoms in some women.
- Avoidance of caffeine, alcohol, tobacco, and spicy foods may be beneficial.

GENERAL Rx

- Estrogen replacement therapy reduces hot flashes by 80% to 90%. Estrogen therapy, however, is contraindicated in many women, and others are fearful of its use. Potential risks and side effects should be considered before using estrogen in any patient. When using estrogen, it is best to use low dose (e.g., Prempro [conjugated equine estrogen 0.45 mg or 0.3 mg plus medroxyprogesterone 1.5 mg]). Femring is an intravaginal ring that is changed every 3 mo and approved to treat vasomotor symptoms in women who have had a hysterectomy. It provides both local and systemic estrogen.
- Megestrol acetate, a progestational agent, is a safer alternative to estrogen in women with a history of receptor-positive breast or uterine cancer and in men receiving androgen ablation therapy for prostate cancer. Usual dose is 20 mg bid.
- The antidepressant venlafaxine has been reported to be 60% effective in reducing hot flashes and represents an alternative treatment modality in women unable or unwilling to use estrogens. Starting dose is 37.5 mg qd, increased as tolerated up to a maximum of 300 mg/day. Other antidepressants such as desvenlafaxine and escitalopram have also been shown to be effective in reducing the number and severity of menopausal hot flashes. Trials have shown that paroxetine is also an effective agent for diminishing hot flashes in postmenopausal women and men receiving androgen ablation therapy.
- Duavee is a new FDA-approved treatment of moderate to severe vasomotor menopausal symptoms. It consists of a combination of conjugated estrogens and bazedoxifene, a new selective estrogen receptor modulator (SERM).
- The anticonvulsant gabapentin (300-1200 mg/day) represents another nonhormonal alternative in the treatment of hot flashes and can be used alone or in combination with venlafaxine.
- The antihypertensive clonidine is also somewhat effective in reducing the frequency of hot flashes in mild cases. Adverse effects include dry mouth, sedation, and dizziness.
- Vitamin E (800 IU/day) may be effective in patients with mild symptoms that do not interfere with sleep or daily function.
- Soy protein (use of soy extracts that contain plant-derived estrogens [phytoestrogens]) is often used; however, clinical trials have not shown clear efficacy.
- Several classes of herbal remedies are available to patients and are commonly used, generally without significant benefit. Frequently used agents are *Cimicifuga racemosa* (black cohosh, snakeroot, bugbane), *Angelica sinensis,* and evening primrose (evening star). Recent trials using the isopropanolic extract of black cohosh rootstock (Remefemin) did show some improvement in controlling menopausal symptoms. Such alternative medications may be used to treat mild to moderate symptoms, but it is possible that symptomatic improvements may derive in part from a placebo effect. Acupuncturists are the second most consulted therapists by menopausal women. Evidence of acupuncture efficacy as an HF treatment is conflicting. A recent randomized trial[1] revealed that Chinese medicine acupuncture was not superior to noninsertive sham acupuncture for women with moderately severe menopausal HFs.

SUGGESTED READING

Available at www.expertconsult.com

RELATED CONTENT

Hot Flashes (Patient Information)
Menopause (Related Key Topic)

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[1]Ee C, et al.: Acupuncture for Menopausal Hot Flashes: A Randomized Trial, Ann Intern Med 164:146-154, 2016.

SUGGESTED READING

Freeman EW, et al.: Efficacy of escitalopram for hot flashes in healthy menopausal women, a randomized controlled trial, *JAMA* 305(3):267–274, 2011.